

DEPARTMENT OF TRANSPORTATION  
FEDERAL AVIATION ADMINISTRATION

R00007DE  
Revision: 2  
Arrow Falcon Exporters Inc.  
UH-1H  
April 4, 2002

TYPE CERTIFICATE DATA SHEET NO. R00007DE

This data sheet, which is part of Type Certificate No. R00007DE, prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder: Arrow Falcon Exporters Inc.  
2081 S. Wildcat Way  
Porterville,  
California 93257

Type Certificate: Utah State University  
Holder Record Department of Industrial Technology and Education  
Logan, UT84322-6000

1-Model UH-1H, 15 PCLM (Utility Helicopter Restricted Category), Approved: August 25, 1997

Engine: Lycoming T53-L-13B, T53-L-13BA

Fuel: MIL-T-5624, Grade JP-4 (Jet B)  
MIL-T-5624, Grade JP-5 (Jet A)  
MIL-T-83133, Grade JP-8 (Jet A-1)  
See U.S. Army TM55-1520-210-10 and Note 15 for emergency fuels.

Engine Limits	Torque	Output	Output	Exhaust	Gas Gen
	Pressure (PSI)	Horsepower (HP)	R.P.M.	Gas Temp. (C)	Speed N1(%)
	50.0	1100	6600	610 to 625	101.5
	50.0	1100	6600	400 to 610	101.5

See Notes 11, 12, and 13. Refer to Operator's Manual TM55-1520-210-10 for additional limitation data.

Rotor Limits	<u>Power Off</u>		<u>Power On</u>
	Maximum R.P.M.	339	324
	Minimum R.P.M.	294	294

Continuous operation 294-324 R.P.M. / Maximum for auto-rotation 339 R.P.M.

Airspeed Limits

Roof Mounted Pitot Static:

Never exceed 124 knots (143 mph) up to 7500 lbs. Gross Weight, sea level to 2000 feet.  
Never exceed 113 knots (132 mph) up to 9500 lbs. Gross Weight sea level to 2000 feet.  
Refer to TM55-1520-210-10, Chap. 5, Sect. V, for specific operating airspeed limitations.  
See Note 2, for specific operation airspeed limitations.

Nose Mounted Pitot Static:

Never exceed 112 knots (128 mph) up to 7500 lbs. Gross Weight, sea level to 2000 feet.  
Never exceed 103 knots (118 mph) up to 9500 lbs. Gross Weight, sea level to 2000 feet.

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Refer to TM55-1520-210-10, Chap. 5, Sect. V for specific operating airspeed limitation.  
See Note 2, for specific operation airspeed limitations.  
airspeed limitations.

C.G. Range: Longitudinal C.G. Limits: (+130.0) to (+144.0)  
Lateral C.G. Limits: Plus or minus 5 inches  
Refer to U.S. Army TM55-1520-210-10, Chap. 6, Section VII, for specific  
C.G. range and limits.

Maximum Weight: 9500 lbs.

Minimum Crew: 1 (Pilot)

No. of Seats: Up to 15 with appropriate seats and restraints. (See U.S. Army TM55-1520-210-10).

Maximum Baggage: 100 lbs. Per Sq. Ft. of cargo area. (See U.S. Army TM55-1520-210-10).

Fuel Capacity: 208.5 U.S. gallons (+151.6) Crashworthy system.  
220 U.S. gallons (+151.6) Non-crashworthy system.

Oil Capacity: 3.25 gallons (+173.0)

Rotor Blade and  
Control Movements: For rigging information, refer to U.S. Army TM55-1520-210-23.  
(Maintenance Manual)

Datum: Station 0, datum is 7.6 inches aft of the most forward point of the fuselage  
nose section. (See U.S. Army TM55-1520-210-10).

Leveling Means: Plumb line from top of cabin door frame to index plate on cabin  
floor. See Note 1.

Eligible Serial No.: U.S. Military Surplus UH-1H Helicopters as identified in FAA Approved  
Arrow Falcon Exporters Inc. Report AF-UH-1H-0100, dated 06-20-00 or  
later FAA Approved revision. Current copy on file at Los Angeles  
ACO.

Certification Basis: Part 21 § 25(a)(2), effective February 1, 1965, including Amendments 21-1 through 21-42. Type  
Certificate No. R00007DE, for the special purpose(s) of:

1) Agricultural Operations under § 21.25(b)(1).

Note: In accordance with § 36.1(a)(4), compliance with noise requirements was not shown.  
Therefore, aircraft certificated under this type certificate are only eligible for agricultural  
operations excepted by § 36.1(a)(4) and defined under § 137.3.

2) Forest and Wildlife Conservation Operations under § 21.25(b)(2)).

Note: In accordance with § 36.1 (a)(4), compliance with the noise requirements was not  
shown. Therefore, aircraft certificated under this type certificate are only eligible for  
dispensing fire fighting material excepted by § 36.1(a)(4) and defined under § 137.3.

3) External Load operation under § 21.25(b)(7).

Note: In accordance with § 36.1(a)(4), compliance with the noise requirements was not shown.  
Therefore, aircraft certificated under this type certificate are only eligible for external loads  
operations excepted by § 36.1(a)(4) and defined under § 133.1(b).

General Note: Any alteration to the aircraft for Special Purposes not identified  
above require further FAA approval and in addition, may require noise and/or  
flight testing.

Date of Application: December 13, 1995

Production Basis: None. Prior to original certification of each aircraft, a FAA representative must perform, a detailed inspection for workmanship, materials, and conformity with the approved technical data following a check, by the type certificate holder, of the flight characteristics in accordance with all applicable portions of Section II of the U.S. Army Technical Manual TM55-1520-242-MTF Maintenance Test Flight Manual, Army Model UH-1 Helicopter, Change 1, dated December 19, 1986, as appropriate for each aircraft, or other FAA approved manual.

Equipment: The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be in each helicopter for certification. The following equipment and documents must be available in each helicopter for certification:

(1) U.S. Army TM55-1520-210-10, Operators Manual, UH-1H.

(2) Standard U.S. Army cargo suspension system installation, 204-070-900-5, 204-070-900-19 IAW TM55-1520-210-23P (Part Manual), installed and maintained IAW TM55-1520-210-23 (Maintenance Manual), and operated IAW TM55-1520-210-10 (Operators Manual) for all external cargo operations.

Note 1: A current weight and balance report including a list of equipment included in the certificated empty weight, and loading instructions, when necessary must be provided for each aircraft at the time of the original certification. Refer to Operators Manual, TM55-1520-210-10, Chapter 6 and Maintenance Manual, TM55-1520-210-23 Para. 1-38, for leveling means and weight and balance determination.

Note 2: The following placards must be prominently displayed in the cabin in clear view of the pilot:

Placard No. 1

CALIBRATED AIRSPEED-KNOTS  
With Roof Mounted Pitot Static

LIMITS	AIRCRAFT WT/KIAS		
	GROSS WEIGHT		
Density Alt. (Ft)	To 7600#	8500#	9500#
SL to 2000	124	118	113
3000	121	115	110
6000	112	106	101
9000	103	97	92
12000	94	88	83
15000	82	76	-
18000	70	-	-

UNDER 7500 LBS. GW USE 6000 TO 6600 RPM RANGE  
OVER 7500 LBS GW USE 6400 TO 6600 RPM RANGE  
POWER OFF 294 TO 339 ROTOR RPM  
REDUCE SPEED WHEN VIBRATION IS EXCESSIVE

Note 2 (cont'd)

**CALIBRATED AIRSPEED – KNOTS**  
With nose mounted pitot static

LIMITS	AIRCRAFT WT/KIAS		
	GROSS WEIGHT		
Density Alt. (Ft)	To 7600#	8500#	9500#
SL to 2000	112	107	103
3000	109	104	100
6000	100	95	91
9000	91	86	82
12000	82	77	73
15000	70	65	-
18000	58	-	-

UNDER 7500 LBS GW USE 6000 TO 6600 RPM RANGE  
OVER 7500 LBS GW USE 6400 TO 6600 RPM RANGE  
POWER OFF 294 TO 339 ROTOR RPM  
DECREASE AIRSPEED IF VIBRATION IS EXCESSIVE

Placard No. 2

External load operations: Vne will be determined for each proposed external load application

Placard No. 3

This rotor craft must be operated in accordance with the restricted category operating limitations of § 91.313.

Placard No. 4

This helicopter must be operated in compliance with the operating limitations specified in the approved helicopter Operators Manual. Refer to TM55-1520-210-10, chapter 5 for operating limits and restrictions.

Note 3:

The helicopter(s) must be serviced, maintained, repaired, inspected and overhauled in accordance with the documents specified in Arrow Falcon Exporters Inc. Instructions for Continued Airworthiness Report AF-UH-1H-01CA, date 06-20-00 (or later FAA accepted revision) or other FAA accepted inspection programs. The TC holders Instructions for Continued Airworthiness Report is part of the TC holders Instructions for Continued Airworthiness.

Note 4:

Prior to obtaining an original Airworthiness Certificate:

- A. Each helicopter must pass a conformity inspection in accordance with this TCDS and Arrow Falcon Exporters Inc. Report No. AF-UH-1H-01CR, dated 06-20-00, (or current revision).
- B. The maintenance, overhaul and modification records of each helicopter must be reviewed for military changes that may effect the airworthiness of the helicopter.
- C. After the required inspections, the aircraft must be found to be in a good state of preservation, repair and in a condition for safe operation.

Note 5:

This aircraft is prohibited from carrying cargo for compensation or hire. Carriage of cargo is limited to such cargo that is incidental to the aircraft owners /operator's business which is other than air transportation.

Note 6:

The cargo suspension assembly (cargo external load hook and release system) shall be installed, tested and maintained in accordance with TM55-1520-210-23-2 Chapter 14, paragraph 14-260.

- Note 7: Restricted category aircraft may not be operated in a foreign country without express written approval of that country.
- Note 8: This aircraft has not been shown to meet the requirements of the applicable comprehensive and detailed Airworthiness Code as provided by Annex 8 to the Convention on International Civil Aviation.
- Note 9: Engine changes are allowed provided the replacement engine is of the same make and model as identified in this TCDS. The replacement engine must have proper military records and have the applicable FAA Airworthiness inspections accomplished.
- Note 10: The Airworthiness Directives for the helicopter and engine contained in Arrow Falcon Exporters Inc. Airworthiness Directive Report AF-UH-1H-01AD dated 06-20-00 (or later FAA approved Revision), must be complied with prior to original certification.
- Note 11: Torque pressure output by the engine torque sensing system varies with individual engines. The calibration of this value is required on each engine and the value corresponding to take-off power is stamped on the engine data plate.
- Note 12: Gas producer speeds as shown under "Engine Limits" are maximum permissible speeds. The gas producer speed for rated power varies with individual engines and must be determined during engine calibration and stamped on the engine data plate. The rated gas producer speed shown on the temperature limit placard installed on the instrument panel must correspond to the engine data plate gas producer speed. Gas producer speed limits also vary with OAT in accordance with the schedule as shown on the Temperature Limits (GO-NO-GO TAKE-OFF) placard on the instrument panel or Health Indicator Test (HIT) results, as applicable.
- Note 13: Maximum permissible exhaust gas temperature varies with ambient temperature as described in the Operator's Manual. Check engine EGT by use of Health Indicator Test (HIT) prior to take-off (see U.S. Army TM55-1520-210-10 and HIT EGT Log for the aircraft.
- Note 14: This approval applies to:  
  
Basic Military Surplus Bell Model UH-1H helicopters with no modifications except as required by Arrow Falcon Exporters Inc. Report AF-UH-1H-0100, dated 06-20-00, (or later FAA Approved revision).
- Note 15: Alternate or emergency fuels are listed in U.S. Army TM55-1520-210-10, Chapter 2, Para. 2-89 and table 2-1. Some limitations apply for the use of certain alternate and emergency fuels, These limitations are listed in this section.
- Note 16: Bell Helicopters Textron, Inc. has no involvement with this Type Certificate.
- Note 17: Any alteration to the type design of this aircraft may require Instructions for Continued Airworthiness. These instructions must be submitted to and accepted by the FTW-AEG, Aircraft Evaluation Group Office prior to approval for return to service.

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